

Mentzelia Floridana, Nutt., is not confined to the west coast. It is firmly established on Anastasia Island, and I have seen a few plants in a neglected spot here in town. I know, to my great annoyance, that it grew plentifully on Merritt's Island in the Indian River, because I heedlessly rambled about one day while botanizing and allowed my dress to become so covered with the old club-shaped hollow seed-vessels, leaves and bits of the brittle stems, that it required the active work of two friends during an entire hour to pick off the pests! The plant seems to be thoroughly armed with bristly barbed hairs, which are well adapted to promote the distribution of the seed vessels.

I saw a patch of flourishing *Iresine vermicularis*, Moquin., upon one of the banks of the Halifax river, and a few months since was pleased to find it establishing itself upon the banks of the Maria Sanchez creek in our town.

During the last three or four years I have occasionally seen *Kallstroemia maxima*, Torr. & Gray, as a very scarce weed in one or two places in cultivated grounds.

Avicennia oblongifolia, Nutt. is quite common on the shores of our inlet, and a *Panacratium* is commonly cultivated in our gardens, which I am sure must be the *Panacratium Caribacum*, L., described by Dr. Chapman in the GAZETTE of March, 1878. It flourishes in cultivation, increasing quite rapidly, and the blossoms are large, very handsome and very fragrant.

Duranta Plumieri, Jacq., is an elegant shrub in our gardens noteworthy for its beautiful, golden, wax-like berries, which remain on the bush a long time. Of the genus *Utricularia* we have about here four described species, *U. inflata*, *U. purpurea*, *U. cornuta*, and *U. subulata*. In October, 1879, I found in muddy places in the pine-barrens several specimens of the smallest *Utricularia* that I have ever seen, and this year I have collected it again in several localities. Prof. A. Gray wrote me last year concerning it, "I have little doubt it is *U. simplex* of C. Wright, Cuba," and that he had no specimens like it. It grows in the same localities with *U. cornuta* and *U. subulata*. The scape is stouter than that of *subulata*, but the corolla is much smaller.

Last spring I saw in the garden of a friend, living about twenty miles south of us, a number of flourishing plants of *Abutilon pedunculare*, HBK. The seeds were brought from the Indian River country, where the plant grows wild. These plants were four or five feet high, and taking kindly to their new home, were rapidly propagating themselves.—MARY C. REYNOLDS, *St. Augustin, Fla.*

CROSS FERTILIZATION OF THE CHESTNUT TREE.—I would like to publish the following field notes, for their bearing on the vexed question of the Cross-Fertilization of the Chestnut Tree:

The first white settlers came to this county (Wabash) in 1803. They were undoubtedly disappointed in not finding the old and familiar chestnut of their eastern homes; and so on their first visit to

the east, did not fail to bring back with them at least a few chestnuts to plant. The cabins being few and far between, the seed in this way became tolerably evenly sprinkled over the whole county. Those of us who are german to the soil have no fond recollections of the surroundings of an eastern home to cherish; consequently this importation stopped with the days of our sires. The result is that, scattered over the county at the sites of the earliest log-cabins, the chestnut tree has reared its head as a monument of the days when the white man and Indian contended for the right of possession.

I have been able to learn the history of 17 trees, and this is probably all to be found in the limits of the county. The following notes have been made either from personal observations or from persons who are thoroughly reliable and familiar with the history; and in some cases the very individuals were consulted who planted the seeds. I will commence at the west side of the county and pass eastward, taking the trees seriatim.

No. 1 was on the F. M. Rigg farm. It grew from seed from Virginia, and when it was cut down, several years since, it was over 18 inches in diameter, and bore an abundance of sterile burs, occasionally a few nuts being found, never more than three or four during a season. No tree of any size nearer than three miles while it was standing.

No. 2.—Mr. T. Rigg has a tree on his place which he has grown from seeds from No. 4. It bore three sterile crops of burs. He then grafted on it two twigs taken from No. 3. The first year the grafts bloomed (they being about 18 inches long) and the tree bore about three pints of nuts. Most of them grew near the grafts, which were on opposite sides of the tree, but a few nuts were scattered in all parts of the tree top. Last spring the grafts did not bloom, and this fall the abundant crop of burs were all empty. Nearest tree is five miles away (No. 4).

No. 3 grew on the J. Beall lot, in Mt. Carmel. It was over 18 inches in diameter when it was blown down by the cyclone, June 4, 1876. It was grown from the same lot of seed as Nos. 4 and 7. For years it yielded abundant crops of burs, but not a chestnut was ever found under it, so far as I can learn. Nearest tree two miles (No. 7).

No. 4 is a group of seven thrifty trees growing on the Wm. Davis farm, from seeds from Ohio, planted forty one years since—the same lot as those that grew Nos. 3 and 7. They measure in circumference, two feet from the ground, 37, 37, 49, 55 and 71 inches, and are near one hundred feet high. (A pear tree near by, planted at the same time, is 80 inches in circumference.) All bear in abundance, and it is very seldom that a sterile bur is found. These trees are one mile from No. 5.

No. 5 is a thrifty tree on A. Woods' farm, and is from fruit from No. 4. It is near thirty years old and bears more or less chestnuts every year, but the crop of empty burs invariably exceeds that of the filled. Is one mile from No. 4, in a northwestern direction.

No. 6 grew on the J. Woods' farm, and was one-half mile north-

west of No. 5. It was blown down last winter. It grew from seeds from Kentucky, planted 54 years since. It was known to bear fruit only one year, and that was eight years since; then only a few nuts. It will be observed that Nos. 4, 5, and 6 are in a line and nearer together than any of the others, being only $1\frac{1}{2}$ miles apart at the extremes.

No. 7 is a thrifty tree growing on M. Reel's farm. It is from the same lot of seeds as Nos. 3 and 4. Is forty-five in hes in circumference, and annually bears a large crop of empty burs. On occasional years a few nuts have been found, never more than four or five. It is two miles from No. 3, and the same distance from No. 4.

No. 8 is a group of three trees, all standing within a few rods of one another, on J. Hurshey's place. They are from seeds from Ohio, planted by him in 1848, and are near one foot in diameter. Have borne chestnuts in abundance for more than twenty years, without one year of failure. These trees are $1\frac{1}{4}$ miles from No. 9.

No. 9 is a group of two trees standing near together on the J. Sitherland farm, grown from seeds which he planted thirty-five years since. Both bear fruit freely. "The burs are always full." They are $1\frac{1}{4}$ miles from No. 8. One tree is much smaller than the other, and is always fuller of nuts. The seeds were obtained from Perry county, Ind., which is about 70 miles away in a direct line, and if it is native there, is the nearest station of which I have any knowledge. These trees are $1\frac{1}{4}$ miles from No. 8. (The chestnut is native in both Perry and Spencer counties, Ind.)

No. 10 is a tree, from seed planted by J. Hoff, on his farm, 34 years since. It is four miles from No. 9, and annually bears a large crop of burs, but never has a chestnut been found under it.

The foregoing observations point to the following conclusions, though they cannot be considered as positive demonstrations:

(1) That in some cases the chestnut tree appears to be sparingly self-fertilizing, while in others it appears to be sterile for a long succession of years. See Nos. 1, 3, 7 and 10

(2) That trees grown from the seed of one tree, freely fertilize one another. See Nos. 4, 8 and 9.

(3) That a sterile tree, growing grafts from another sterile tree, becomes fertile when the grafts bloom, and sterile when they fail to bloom. No. 2.—J. SCHNECK, *Mt. Carmel, Ill.*

QUEER PLACES FOR FERNS.—I think I may claim a *new locality* for a common fern. While recently exploring an extensive live-oak hummock, I came to a lofty pine-tree, *Pinus australis*, I think, which had had a large notch cut in it, about three feet from the ground. Upon the base of this notch, with its rootstock firmly fastened to the tree by the exuding pitch, grew a brave little upstart of a *Woodwardia Virginica*, Willd., its three or four six inch-long fronds healthy even though dwarfed, and two of them well fruited. Several of the pinnæ had been glued fast to the side of the tree by a thin film of the pitch. Two years ago I saw large, handsomely-fruited fronds of the *Polypo-*